REMARKS

Upon entry of this amendment, claims 1 to 4, 8 to 10, 33 to 35 and 40 to 42 are pending in the application. Claims 1 and 33 have been amended to incorporate the features of dependent claims 7 and 39 respectively. Claims 9 and 41 have been amended to indicate the avian cells are in culture as disclosed throughout the specification. Amendments to the claims and cancellation of claims were made for the purpose of advancing the case toward allowance and the amendments should not be viewed as acquiescence to any of the Examiner's rejections. Applicant believes no new matter is introduced by this amendment and, therefore, entry and consideration of same is believed proper and respectfully requested.

The Examiner rejects the claims under 35 USC 112, first paragraph, stating that the specification, while being enabling for integrating a transgene into avian blastodermal cells by electroporating the transgene into the avian blastodermal cells, does not reasonably provide enablement for integrating a transgene into an avian totipotent cell by electroporating the transgene into avian blastodermal cells. Applicant traverses the rejection.

To obtain integration of the transgene in totipotent cells, one could follow the teachings of the specification. As a source of evidence that the methods of the invention do in fact result in DNA integration into totipotent cells, see page 1643 of Wang (Stem Cells, 2006, vol 24, p1638-1654, of record), the paragraph entitled "Transgenic BDC-Derived Cells were Detected in the Germline Tissues of Chimeras" where data is discussed that demonstrates the presence of the electoporated genetic material in the germline tissue of the chimeras (note that the Examiner states in the first full paragraph at page 5 of the Office action that Wang describes the methods taught by applicants).

The Examiner also cites Naito (J Poultry Sci., Oct. 2002, vol 39, p 292-301) as evidence of lack of enablement. The methods employed in Naito are not the same as those in the present case. For example, Naito employs a very specific technique of electroporating the cells in situ. That is, in Naito the cells are present in the embryo which is electroporated and the electroporated embryo is transferred into a host egg shell. The Examiner points to page 294 of Naito stating that the electroporated cells of Naito are "put in culture to undergo cellular division". This statement could be misleading since what actually occurred, as describe at page 294 of Naito, is "The manipulated embryos were transferred into host eggshells" which were incubated under appropriate conditions to obtain stage 18 embryos. Such in ovo incubation of an embryo is not considered to be the culturing

of cells within the accepted meaning. The methods of Naito are different from those of the present invention as disclosed and claimed and as such Naito does not provide evidence for lack of enablement.

The specification has been amended to correct an error at page 48, line 19, where the sentence "Therefore confirmation of integration was obtained." was truncated to "Therefore confirmation". Since the two sentences just prior to "Therefore confirmation" state "A single band of ~ 13 kb was detected in Bam HI digested genomic DNA by the IFN probe. With integration, a band larger than 8.5 kb would be expected." and since the title of the paragraph beginning at page 48 line 3 is "Confirmation of transgene integration into chicken genome", it is clear that confirmation of integration was sought and obtained. Applicant has deleted the truncated sentence to prevent confusion. In the enablement rejection the Examiner appears to be indicating the truncation of this sentence somehow is responsible for a lack of guidance in making and using the invention. This is not the case since how to make and use the invention is made clear in the specification without this complete sentence.

The Examiner states that the specification is enabling for integrating a transgene into avian blastodermal cells by electroporating the transgene into the avian blastodermal cells. Claim 1 has been amended to specify blastodermal cells in accordance with the Examiner's comments.

The Examiner rejects claims 1, 3-6, 9, 10, 33, 35-38, 41 and 42 under 35 USC 102(a) and/or 35 USC 102(b) in view of Naito (J. Poultry Sci., Oct. 2002, vol 39, p292-301); Etches (Poultry Sci. 1997, vol 76, p1075-1083) and/or Wei (Poultry Sci. 2001, vol 80, p 1671-1678). Applicant traverses each of the rejections. However, the claims have been amended to include antibiotic resistance as a marker in the cells, as specified in dependent claims 7 and 39 which were not rejected, and as such the Examiner's rejection is made unnecessary.

The Examiner rejects claims 1-3, 9, 10, 33-35, 41 and 42 under 35 USC 103(a) as being unpatentable over Wei in view of Nicolas-Bolnet (Poultry Sci., 1995, vol. 74, p 1102-1116) over Erches (Poultry Sci., 1997, vol 76, p 1075-1083) in view of Nicolas-Bolnet (Poultry Sci., 1995, vol. 74, p1102-1116). Applicant traverses each of the rejections. However, the claims have been amended to include use of antibiotic resistance as a marker in the cells, as specified in dependent claims 7 and 39 which were not rejected, and as such the Examiner's rejection is made unnecessary.

The Examiner objects to claims 5 and 37 under 37 CFR 1.75 as being substantial duplicates

of claims 4 and 36. Claims 5, 36 and 37 have been canceled making the objection unnecessary.

If any issues remain to be addressed in this matter, which might be resolved by discussion, the Examiner is respectfully requested to call applicants' undersigned counsel at the number indicated below.

Respectfully submitted,

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